What Is Claimed Is:

1. A method for operating an internal combustion engine having a fuel pump with a drive shaft, the fuel pump conveying fuel into at least one fuel-collection line, the fuel being subsequently conveyed to at least one combustion chamber via at least one fuel-injection device, the method comprising:

setting, by means of a valve device, a quantity of the fuel conveyed by the fuel pump into the fuel-collection line;

wherein the valve device is configured to selectively connect a discharge side of the fuel pump to a low-pressure region of the fuel pump, and wherein the valve device is configured to selectively disconnect the discharge side from the low-pressure region, and wherein, in supplying the quantity of fuel, a supply rate, defined as the number of supply phases of the fuel pump per rotation of the drive shaft, is determined as a function of at least one operating parameter of the internal combustion engine.

2. The method as recited in claim 1, wherein the supply rate is a function of at least one of an operating temperature of the internal combustion engine, a fuel quantity to be injected, and a rotational speed of the internal combustion engine.

3. The method as recited in claim 1, further comprising:

(a) ascertaining at least one of an interval between a first supply phase of a new supply-rate interval and a last supply phase of a preceding supply-rate interval, wherein a supply-rate interval is defined as a supply interval having a specific supply rate, and a duration of the first supply phase of the new supply-rate interval; and

(b) changing the supply rate.

4. The method as recited in claim 3, wherein the middle of the last supply phase of the preceding supply-rate interval is

spaced apart from the middle of the first supply phase of the new supply-rate interval by at least approximately a waiting angle W of a crankshaft of the internal combustion engine, wherein W is calculated according to the formula:

$$W = 720 * ((X + Y)/(2XY)),$$

and wherein X is the supply rate before switching and Y = the supply rate after switching.

5. The method as recited in claim 4, wherein a change in the supply rate is allowed only when a supply phase is permitted at an angular position of the crankshaft that corresponds to a sum of the instantaneous angular position of the crankshaft and the waiting angle W.

6. A computer program containing a plurality of computer-executable program codes for performing, when executed on a computer, a method for controlling an internal combustion engine having a fuel pump with a drive shaft, the fuel pump conveying fuel into at least one fuel-collection line, the fuel being subsequently conveyed to at least one combustion chamber via at least one fuel-injection device, the method comprising:

setting, by means of a valve device, a quantity of the fuel conveyed by the fuel pump into the fuel-collection line;

wherein the valve device is configured to selectively connect a discharge side of the fuel pump to a low-pressure region of the fuel pump, and wherein the valve device is configured to selectively disconnect the discharge side from the low-pressure region, and wherein, in supplying the quantity of fuel, a supply rate, defined as the number of supply phases of the fuel pump per rotation of the drive shaft, is determined as a function of at least one operating parameter of the internal combustion engine.

7. The computer program according to claim 6, wherein the method for controlling the internal combustion engine further comprises:

(a) ascertaining at least one of an interval between a first supply phase of a new supply-rate interval and a last supply phase of a preceding supply-rate interval, wherein a supply-rate interval is defined as a supply interval having a specific supply rate, and a duration of the first supply phase of the new supply-rate interval; and

(b) changing the supply rate.

8. The computer program according to claim 7, wherein, in the method for controlling the internal combustion engine, the middle of the last supply phase of the preceding supply-rate interval is spaced apart from the middle of the first supply phase of the new supply-rate interval by at least approximately a waiting angle W of a crankshaft of the internal combustion engine, wherein W is calculated according to the formula:

$$W = 720 * ((X + Y)/(2XY)),$$

and wherein X is the supply rate before switching and Y = the supply rate after switching.

9. A computer-readable storage medium for storing a computer program containing a plurality of computer-executable program codes for performing, when executed on a computer, a method for controlling an internal combustion engine having a fuel pump with a drive shaft, the fuel pump conveying fuel into at least one fuel-collection line, the fuel being subsequently conveyed to at least one combustion chamber via at least one fuel-injection device, the method comprising:

setting, by means of a valve device, a quantity of the fuel conveyed by the fuel pump into the fuel-collection line;

wherein the valve device is configured to selectively

connect a discharge side of the fuel pump to a low-pressure region of the fuel pump, and wherein the valve device is configured to selectively disconnect the discharge side from the low-pressure region, and wherein, in supplying the quantity of fuel, a supply rate, defined as the number of supply phases of the fuel pump per rotation of the drive shaft, is determined as a function of at least one operating parameter of the internal combustion engine.

10. The computer-readable storage medium according to claim 9, wherein the method for controlling the internal combustion engine further comprises:

(a) ascertaining at least one of an interval between a first supply phase of a new supply-rate interval and a last supply phase of a preceding supply-rate interval, wherein a supply-rate interval is defined as a supply interval having a specific supply rate, and a duration of the first supply phase of the new supply-rate interval; and

(b) changing the supply rate.

11. The computer-readable storage medium according to claim 10, wherein, in the method for controlling the internal combustion engine, the middle of the last supply phase of the preceding supply-rate interval is spaced apart from the middle of the first supply phase of the new supply-rate interval by at least approximately a waiting angle W of a crankshaft of the internal combustion engine, wherein W is calculated according to the formula:

$$W = 720 * ((X + Y)/(2XY)),$$

and wherein X is the supply rate before switching and Y = the supply rate after switching.

12. A control device for an internal combustion engine having a fuel pump with a drive shaft, the fuel pump conveying fuel

into at least one fuel-collection line, the fuel being subsequently conveyed to at least one combustion chamber via at least one fuel-injection device, comprising:

an arrangement for setting, by means of a valve device, a quantity of the fuel conveyed by the fuel pump into the fuel-collection line;

wherein the valve device is configured to selectively connect a discharge side of the fuel pump to a low-pressure region of the fuel pump, and wherein the valve device is configured to selectively disconnect the discharge side from the low-pressure region, and wherein, in supplying the quantity of fuel, a supply rate, defined as the number of supply phases of the fuel pump per rotation of the drive shaft, is determined as a function of at least one operating parameter of the internal combustion engine.

13. The control device as recited in claim 12, wherein the supply rate is determined as a function of at least one of an operating temperature of the internal combustion engine, a fuel quantity to be injected, and a rotational speed of the internal combustion engine.

14. The control device as recited in claim 12, further comprising:

(a) an arrangement for ascertaining at least one of an interval between a first supply phase of a new supply-rate interval and a last supply phase of a preceding supply-rate interval, wherein a supply-rate interval is defined as a supply interval having a specific supply rate, and a duration of the first supply phase of the new supply-rate interval; and

(b) an arrangement for changing the supply rate.

15. The control device as recited in claim 14, wherein the middle of the last supply phase of the preceding supply-rate interval is spaced apart from the middle of the first supply phase of the new supply-rate interval by at least

approximately a waiting angle W of a crankshaft of the internal combustion engine, wherein W is calculated according to the formula:

$$W = 720 * ((X + Y)/(2XY)),$$

and wherein X is the supply rate before switching and Y = the supply rate after switching.

16. The control device as recited in claim 15, wherein a change in the supply rate is allowed only when a supply phase is permitted at an angular position of the crankshaft that corresponds to a sum of the instantaneous angular position of the crankshaft and the waiting angle W.